

CLAIMS

What I claim is:

1. A method of treating diseased cutaneous and sub-cutaneous tissue having symptoms of lipodermatosclerosis with laser radiation, the diseased cutaneous and subcutaneous tissue treatment method comprising the steps of:

- A. exposing the diseased cutaneous and subcutaneous tissue to laser radiation absorbable by hemoglobin, with at least a substantial portion of the laser radiation penetrating said diseased cutaneous and subcutaneous tissue to a depth exceeding 4.5 millimeters below the skin surface on said diseased cutaneous tissue, said exposing of said laser radiation being for a period of time sufficient to damage hemoglobin in the diseased cutaneous and subcutaneous tissue through said depth exceeding 4.5 millimeters below said skin surface; and
- B. waiting a period of time whereby healing may take place in the diseased cutaneous and subcutaneous tissue,

whereby lipodermatosclerosis symptoms in the diseased cutaneous and subcutaneous tissue may be relieved.

2. The diseased cutaneous and subcutaneous tissue treatment method of claim 1 in which said substantial portion of said laser radiation penetrate said diseased cutaneous and subcutaneous tissue to a depth exceeding 5.5 millimeters below said skin surface and wherein said exposing of said laser radiation is for a period of time sufficient to damage

hemoglobin in the diseased cutaneous and subcutaneous tissue through said depth exceeding 5.5 millimeters below said skin surface

3. The diseased cutaneous and subcutaneous tissue treatment method of claim 1 also including step C: repeating steps A and B.
4. The diseased cutaneous and subcutaneous tissue treatment method of claim 3 also includes step D: again repeating at least step A.
5. The diseased cutaneous and subcutaneous tissue treatment method of claim 2 also including step C: repeating steps A and B.
6. The diseased cutaneous and subcutaneous tissue treatment method of claim 5 also includes step D: again repeating at least step A.
7. The diseased cutaneous and subcutaneous tissue treatment method of claim 1 in which step A is conducted non-invasively.
8. The diseased cutaneous and subcutaneous tissue treatment method of claim 2 in which step A is conducted non-invasively.
9. The diseased cutaneous and subcutaneous tissue treatment method of claim 4 in which step A is conducted non-invasively.

10. The diseased cutaneous and subcutaneous tissue treatment method of claim 6 in which step A is conducted non-invasively.

11. A method of treating a patient having lipodermatosclerosis in a diseased area on the patient's leg, the lipodermatosclerosis treatment method including the steps of:

A. exposing the diseased area to multiple wavelengths of laser radiation including by:

(i) exposing the diseased area with one laser having at least one laser wavelength penetrating the diseased area to a relatively shallow depth; and

(ii) exposing the diseased area with another laser having at least another laser wavelength penetrating the diseased area to a relatively deeper depth than the relatively shallow depth of the one laser; and

B. then waiting a period of time for the diseased area to heal from the exposing step A above.

12. The lipodermatosclerosis treatment method of claim 11 wherein the one laser wavelength is absorbed by oxygenated hemoglobin.

13. The lipodermatosclerosis treatment method of claim 12 wherein said another laser wavelength is absorbed by de-oxygenated hemoglobin.

14. The lipodermatosclerosis treatment method of claim 12 wherein the one laser wavelength is absorbed by oxygenated hemoglobin.
15. The lipodermatosclerosis treatment method of claim 11 wherein the one laser wavelength is absorbed by melanin.
16. The lipodermatosclerosis treatment method of claim 14 wherein said another laser wavelength is absorbed by melanin.
17. The lipodermatosclerosis treatment method of claim 11 also including step C: after completing step B repeating step A at least once.
18. The lipodermatosclerosis treatment method of claim 13 also including step C: after completing step B repeating step A at least once.
19. The lipodermatosclerosis treatment method of claim 16 also including step C: after completing step B repeating step A at least once.
20. The lipodermatosclerosis treatment method of claim 17 also including step D: after completing step C again repeating step A.

21. The lipodermatosclerosis treatment method of claim 19 also including step D: after completing step C again repeating step A.

22. A method of treating a patient having lipodermatosclerosis in a diseased area on the patient, the lipodermatosclerosis treatment method including the steps of:

A. exposing the diseased area to multiple wavelengths of laser radiation including by:

- i. exposing the diseased area with a first laser having a first laser wavelength absorbed by hemoglobin and melatonin;
- ii. exposing the diseased area with a second laser having a second laser wavelength absorbed by oxygenated hemoglobin; and

B. then waiting a period of time for healing to take place in the diseased area; whereby at least lipodermatosclerosis symptoms may be reduced in the diseased area.

23. The lipodermatoscleroris treatment method of claim 22 also including as step C: after step B repeating step A at least once.

24. The lipodermatosclerosis treatment method of claim 23 wherein Step C also includes waiting a period of time for healing to take place in the diseased area and then repeating step A at least once again.

25. The lipodermatosclerosis treatment method of claim 22 wherein the first laser wavelength is 532 nm and the second laser wavelength is 1064 nm.

26. The lipodermatosclerosis treatment method of claim 23 wherein the first laser wavelength is 532 nm and the second laser wavelength is 1064 nm.
27. The lipodermatosclerosis treatment method of claim 24 wherein the first laser wavelength is 532 nm and the second laser wavelength is 1064 nm.
28. A method of treating a patient having indurated tissue, the indurated tissue treatment method including the step A of exposing the indurated tissue with laser radiation having a first laser wavelength absorbed by hemoglobin molecules, whereby the hemoglobin molecules may become heated.
29. The indurated tissue treatment method of claim 28 also including the step B of waiting for a period of time for healing of the indurated tissue and then C re-exposing the indurated sub-cutaneous tissue with laser radiation.
30. The indurated tissue treatment method of claim 28 wherein step A also includes exposing the indurated tissue with additional laser radiation having a second wavelength.
31. The indurated tissue treatment method of claim 29 wherein step A also includes exposing the indurated tissue with additional laser radiation having a second wavelength.

32. The indurated tissue treatment method of claim 29 wherein step C also includes re-exposing the indurated tissue with the additional laser radiation having the second wavelength.
33. The indurated tissue treatment method of claim 28 in which the treatment is non-invasive.
34. The indurated tissue treatment method of claim 32 in which the treatment is non-invasive.
35. A method of treating a patient having skin with excessive fluid weeping, the weeping skin treatment method including the step A of exposing the weeping skin with laser radiation having a first laser wavelength absorbed by hemoglobin molecules, whereby the hemoglobin molecules may become damaged to a degree that stimulates healing.
36. The weeping skin treatment method of claim 35 also including the step B of waiting for a period of time for healing of tissue exposed in Step A and then C re-exposing the weeping skin with laser radiation.
37. The weeping skin treatment method of claim 35 wherein step A also includes exposing weeping skin with additional laser radiation having a second wavelength.

38. The weeping skin treatment method of claim 36 wherein step A also includes exposing the weeping skin with additional laser radiation having a second wavelength.

39. The weeping skin treatment method of claim 38 wherein step C also includes re-exposing the weeping skin with additional laser radiation having the second wavelength.

40. The weeping skin treatment method of claim 35 in which the treatment method is non-invasive.

41. The weeping skin treatment method of claim 35 in which the treatment method is non-invasive.

42. The weeping skin treatment method of claim 40 in which the treatment method is non-invasive.

43. A method of treating diseased cutaneous and sub-cutaneous tissue having symptoms of lipodermatosclerosis with electromagnetic radiation, the diseased cutaneous and subcutaneous tissue treatment method comprising the steps of:

A. exposing the diseased cutaneous and subcutaneous tissue to electromagnetic radiation with at least a substantial portion of the electromagnetic radiation penetrating said diseased cutaneous and subcutaneous tissue to a depth exceeding 4.5 millimeters below the skin surface on said diseased cutaneous tissue, said exposing of said electromagnetic radiation being for a period of time sufficient to

- damage a component in the diseased cutaneous and subcutaneous tissue through said depth exceeding 4.5 millimeters below said skin surface; and
- B. then waiting a period of time whereby healing may take place in the diseased cutaneous and subcutaneous tissue,
whereby a lipodermatosclerosis symptom in the diseased cutaneous and subcutaneous tissue may be relieved.
44. The treatment method of claim 43 wherein the exposure of step A penetrates said diseased cutaneous and subcutaneous tissue to a dept exceeding at least 5.5 millimeters below the skin surface on said diseased cutaneous tissue.
45. The treatment method of claim 43 wherein the exposure causes substantial damage to at least a portion of hemoglobin in the penetrated cutaneous and subcutaneous tissue.
46. The treatment method of claim 44 wherein the exposure causes substantial damage to at least a portion of hemoglobin in the penetrated cutaneous and subcutaneous tissue.
47. The treatment method of claim 46 wherein the exposure causes substantial damage to at least a portion of melanin in the penetrated cutaneous tissue.
48. The treatment method of claim 47 wherein exposure is applied non-invasively.